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# AGRICULTURAL MARKETING

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FROZEN PIZZA  
INSPECTED FOR WHOLESOMENESS



# School Lunch Prices Stay in Line



**H**OW MANY EATING places do you know that haven't increased their prices in the last 10 years, yet have maintained the high quality of food served?

Such places do exist. In Norfolk, Va., there is a chain of 72 cafeterias—school cafeterias—which have held the price line on lunches.

Harry Mayo, director of Norfolk's school food service program, proudly boasts, "We haven't increased our lunch price since 1958, while our salary expenses have tripled."

As Norfolk schools participate in the U.S. Department of Agriculture's National School Lunch Program, they serve free or reduced price lunches to children who are unable to pay the full price. At the same time they keep the prices low for all. At the end of the 1968-69 school year, nearly 27,000 school children were served daily. Of these, nearly 13,000 were receiving their meals free or at a reduced rate.

Serving a large volume of lunches each day is necessary to hold prices down, because the schools can buy food in greater quantities at less cost. Therefore, Mr. Mayo works hard at encouraging students to eat lunch at school. Making the food attractive, serving adequate quantities, and keeping the price low are ways he tries to do this.

To these ends he regularly holds workshops during the summer on quantity cookery for lunchroom managers, cooks, and potential cooks. And he invites school principals, superintendents, and others to attend the last day of these workshops in order to acquire and maintain their support.

As a result, a large number of students buy school lunches and food can be bought in quantities, which not only means a decrease in cost, but also provides uniform quality.

In 1966, food costs accounted for

63.3 per cent. In 1967, it decreased to 59.09 per cent. Last year costs decreased to 56 per cent.

Because the city of Norfolk recognizes the importance of volume buying in maintaining a high quality school lunch at a low price, it has done what no other city has—built a \$325,000 food warehouse to be used by the schools.

The school food service section will rent the warehouse from the city for \$32,500 a year—a lower price than what it has been paying for commercial storage. Then in 10 years, the warehouse will belong to the school system.

"Having one of the most modern warehouses at our disposal provides unlimited possibilities for us in lowering costs," Mayo says.

The warehouse has a separate freezing room maintained at 10 degrees below zero, a refrigerated room at 36 to 40 degrees, a room for storage of disposable items such as napkins and towels, and an air-cooled storage room maintained at 70 degrees for storage of canned goods.

It also has an enclosed loading dock so refrigerated trucks can be plugged in. This way a truck can start loading in the afternoon and finish in the morning. Before, if there wasn't enough time to complete the loading in the afternoon, it had to wait until the next morning because there was no way to keep the food cold. This became a waste of time for the trucks, drivers, and warehousemen.

Seeing that school children have access to a low-cost nutritious meal is important to Mayo. "I used to be an elementary school teacher before I got involved in school feeding," he said. "I can tell you from experience that there is a tremendous relationship between a child's ability to be attentive and learn and whether or not he eats a good meal." □

THE YEAR 1969 MARKED an era of active attack on hunger and malnutrition in the United States. Particular emphasis was placed on improving the nutritional status of American school and pre-school children.

This emphasis resulted in record participation during 1969 in all the child nutrition programs, administered by the Food and Nutrition Service of the U.S. Department of Agriculture.

In the School Lunch Program last year, national gains were registered. Well over 20 million school children, representing about 75,000 schools across the country, received school lunches in 1969, as compared to 18.8 million in almost 72,000 schools in 1968.

About 3.37 billion meals were served through the National School Lunch Program, meaning that 150 million more meals were served in 1969 than in 1968. More importantly, an average of about 15 percent of all the meals in 1969 were served free or at greatly reduced prices to school children from low-income families. Thirteen percent were free or at reduced prices in 1968. Currently, well over 17 percent are free or at reduced prices.

Although it's a smaller program, the school breakfast program showed even more impressive advances. It virtually doubled in one year. Whereas in 1968, about 167,000 children were eating school breakfasts in 1,325 schools, there were about 300,000 children in 2,900 schools getting top-of-the-morning nutrition through school breakfasts in 1969. Total breakfasts served also more than doubled from 16 million to 35.6 million. Over 70 percent of the breakfasts were served free or at nominal prices.

The Special Food Service Program for Children really got off the ground this past year. As was expected, the largest participation, primarily through summer recreation activities, came last summer. By mid-summer, the program was operating in 2,384

# 1969 Marked New Era in Child Nutrition

centers and reached about 355,000 children. This past fall, well over 100,000 pre-school youngsters were benefiting from this program in child care centers across the country.

Activities last summer showed what can be done through this program for making food and nutrition a 12-month opportunity for school-age children, and particularly those from low-income families, as well as pre-school youngsters in child care centers and other similar operations. This program has a great potential, especially in central metropolitan areas where the need for such food programs is very apparent.

About 2 years ago USDA launched "Operation Metropolitan," in an effort to expand and improve school food services in all cities in the United States with a population over a quarter of a million people. Its goals were first to bring every one of the 57 largest cities into the National School Lunch Program; second, to expand the program into new areas within the cities and particularly in poverty areas; and third, but equally important, to provide more free and reduced price lunches to more low-income children. Five

years ago, of the 57 major U.S. cities, over a dozen did not even have one school in the National School Lunch Program. Now, after about 2 years of "Operation Metropolitan," as of this past September, each of these cities has some participation in the National School Lunch Program.

Although over a dozen of these large cities can boast of having all their schools in the school lunch program, there still are many others that don't fare so well, especially in the low-income areas. It is estimated that there are about 3,173 schools in very low-income areas in the large metropolitan cities. Of these 2,141 schools participate in the school lunch program. About 365 schools have a food service of some other kind. Unfortunately, about 667 of these very low-income area schools have no food service at all. Here a greater effort must be applied.

Another major target in the child nutrition area is to get lunches to 6 million school children from low-income families this school year. The school lunch program reached over 3 million of these needy children last year.

In addition to "Operation Metropolitan," State and local school officials were encouraged this past fall to set targets for reaching more children in metropolitan areas with lunches, particularly free ones. The aim also was to expand food service to as many new schools as possible.

Many other metropolitan areas have made last fall a time for accelerated child feeding expansion. Such cities as Baltimore, Chicago, Philadelphia, Pittsburgh, Memphis, Indianapolis, Wichita, Dallas, Cleveland, and St. Louis undertook commendable expansion goals, and results are just now coming in.

In child nutrition, all Americans have a special obligation to insure that this generation will not experience repetitions of the past but will benefit from the advances of today and the near future. Although much was accomplished in 1969, even more remains to be attained in 1970. □



OCTOBER 21 WAS A DAY unlike any other day in Belleville, N.J. It was "Food Stamp Program Day," set aside to give those in the community with low incomes a special opportunity to apply for the U.S. Department of Agriculture food assistance program.

About 200 people visited the specially set up registration office in the town's council chambers. Of these, 161 were certified to participate in the program. Additional applications were also approved later, just about doubling the community's entire Food Stamp Program participation from the previous month.

The success of this special drive was not an accident. It took the combined efforts of the USDA's Food and Nutrition Service Newark field office, the Essex County Welfare Board, Belleville town officials and all sectors of the community to make it truly a day to remember.

It all started at a Town Hall meeting, called to discuss how Belleville could enroll the many eligible but not participating low-income families.

A date was set on which a certifying team from the county office in Newark would come to Belleville. Public Affairs Commissioner Vincent Strumolo had printed several hundred posters which were placed strategically around town so that a maximum number of people would see them. They gave the time and place people could register.

The town also printed about 10,000 flyers announcing the event and spelling out the eligibility re-

## Belleville Campaigns For Food Stamps

quirements. About a third of these were distributed to school children. Most of the others were made available to food stores in the area by USDA. They were stuffed into grocery bags as shoppers made their purchases.

Four supermarket chains set up in-store displays at which Essex County Welfare Board home economists Mrs. Christine Jackson and Mrs. Elsa Cannella spread the word to passing shoppers. Three of these stores placed large signs in their windows saluting the special day.

The town librarian prepared a special display consisting of books on food and nutrition. Service clubs, PTA's, the Salvation Army and various churches publicized the day through bulletins.

"We were frankly quite surprised by the tremendous number of people who applied," commented Jerome Kennedy, the county's Food Stamp Program certification officer. He went on to say: "We thought the five people we assigned to handle applications would be adequate. However, it was necessary to call for additional help and we ended up with 10 people taking applications. We also had to have one return the following day to handle the remaining applicants.

Most of those who applied were either senior citizens living on fixed income or families with a wage-earner who had a low income. None of these people are on the public assistance rolls. Those who are were automatically certified when the program started in the county in July."

Malachy Cox, the officer-in-charge of the USDA's Food and Nutrition Service Newark field office, was also quite impressed by the turn-out. He pointed out that "this increased enrollment will not only provide more and better food for these people, but will also add several thousand dollars annually to the Belleville economy. This is the amount in bonus coupons we expect to issue to these new participants monthly."

As a result of the Belleville experience, USDA and local officials plan to have similar "days" in other Essex County communities.

The Food Stamp Program, operated jointly by the USDA's Food and Nutrition Service and the New Jersey Department of Institutions and Agencies, enables participants to exchange money they would normally spend on food for coupons worth more. These in turn can be spent like cash for food items at authorized stores. □



## Food Boat Drops Anchor at Tangier

A LONG GREY AND WHITE fishing boat with a small American flag hoisted at the rear pulls into Tangier Island each month. Although fishing boats are common on the island, this boat is special because it doesn't contain fish.

It contains food. Donated food for the island's low-income residents who take part in the U.S. Department of Agriculture's food assistance program.

Tangier Island's food distribution program is an excellent example of how far the Virginia Department of Agriculture and Commerce will go to see that the State's needy people are fed. About 1,000 pounds of USDA foods are delivered to the island each month.

Nearly 850 people live on Tangier Island, and the only sources of income are fishing and crabbing—both seasonal. When crabbing is out of season or the fishing isn't good, times can be hard on the island's residents.

Most of the 57 persons who take part in the food assistance program are either the very young or the very old—people not in the labor market.

Located in the middle of the Chesapeake Bay, Tangier Island is isolated from the mainland. Food has to be brought from the mainland, and the only regular transportation to or from the island is a daily mail boat.

Stores as well as trash and litter, are very scarce on the island. There are no doctors on Tangier, but emergency medical service is provided by a U.S. Naval Air Station via helicopter.

Why do people prefer the isolation and hardships of a place like Tangier Island instead of the convenience of modern life on the mainland? Perhaps they cling to the heritage of the pioneers who settled the island nearly 300 years ago.

Tangier was visited in 1608 by Captain John Smith, who gave the island its name. It was settled in 1686 by John Crockett and his sons' families.

In 1814, Tangier was the headquarters of a British fleet that ravaged the Chesapeake Bay area. This fleet sailed from Tangier Island to attack Fort McHenry near Baltimore. And it was during this attack that the Star-Spangled Banner was written.

Regardless of why people stay on Tangier Island, there are a number of persons who are determined to see that those in need of food assistance receive it. One such person is Mrs. Stuart (Jo Sue) Matthews.

Mrs. Matthews is the commodity distribution supervisor for Accomack County. Each month she accompanies the food shipment for the 2-hour trip to Tangier Island where she helps load the food on the island's only

truck and then helps distribute the food to those taking part.

"We've come in snow and we've come in rain," she says. "We've even had to break ice."

All of the food is distributed within a few hours. People come to pick up their monthly food supply with wheelbarrows and bicycles. Except for the truck that carries the food, there is only one other car on the island. Bicycles and motorscooters are the main mode of transportation.

Certifying the eligibility of a person to take part in the food program is the responsibility of the Accomack Welfare Department. To certify eligible persons, the welfare workers have to stay on the island for a few days.

Operating the food program on Tangier Island requires a tremendous amount of work and cooperation, but Mrs. Matthews said the satisfaction of knowing that the effort is appreciated makes it worthwhile.

"I learned that right after the program started," she said. "A woman came up to me and said, 'Mrs. Matthews, this is the first month since my husband has been sick that my children have had enough to eat.'"

"When you hear things like that, it makes you want to get the food to them even if you have to use a rowboat." □



**S**TINKBUGS MAY SOUND funny to some people—but not to the multi-billion dollar soybean industry. The farm value of last year's U.S. crop was \$2.5 billion. Anything that upsets the marketing of this valuable crop, therefore, has far-reaching economic effects. But that's exactly what happened when the stinkbug came on the scene.

The stinkbug likes to feed on particular crops such as lima beans, snap beans, and peaches and in recent years has migrated to soybeans in Missouri, Indiana, Arkansas, Louisiana, and Mississippi. The bug inflicts damage by stinging the bean.

Damage from stinkbugs proved widespread in recent years throughout the southern soybean growing area. This presented several problems:

- Exporters and processors objected to buying soybeans damaged by stinkbugs except at discount.
- Growers, on the other hand, claimed that such damage was slight and harmless to the quality of the beans.
- Inspectors licensed by the Grain

Division in the U.S. Department of Agriculture's Consumer and Marketing Service, moreover, had no special criteria to follow in assessing stinkbug damage.

*Much of the soybean crop is marketed on the basis of U.S. grades, which provide a means of describing the quality and establishing the value of the beans. The soybeans are inspected for grade under authority of the United States Grain Standards Act. The act requires that soybeans sold by grade for export must have the grade certified by an inspector licensed by C&MS' Grain Division. Soybeans sold in domestic commerce are inspected on a permissive basis.*

To find a solution to the problem of grading stinkbug-damaged soybeans, C&MS launched a series of tests in cooperation with the University of Missouri, USDA's Agricultural Research Service, and the soybean industry. The tests included controlled exposure of soybeans to stinkbugs. The results, analyzed by

C&MS' Grain Division, showed conclusively that stinkbug damage affects the protein and oil content of soybeans.

Both damaged and undamaged soybeans were analyzed. The results showed that badly damaged soybeans had a loss in oil content but an increase in protein content. It was also found that an increase in punctures (some soybeans were stung ten or more times) resulted in a greater loss of oil. Furthermore, there was a definite drop in the quality of the oil after a soybean had been stung.

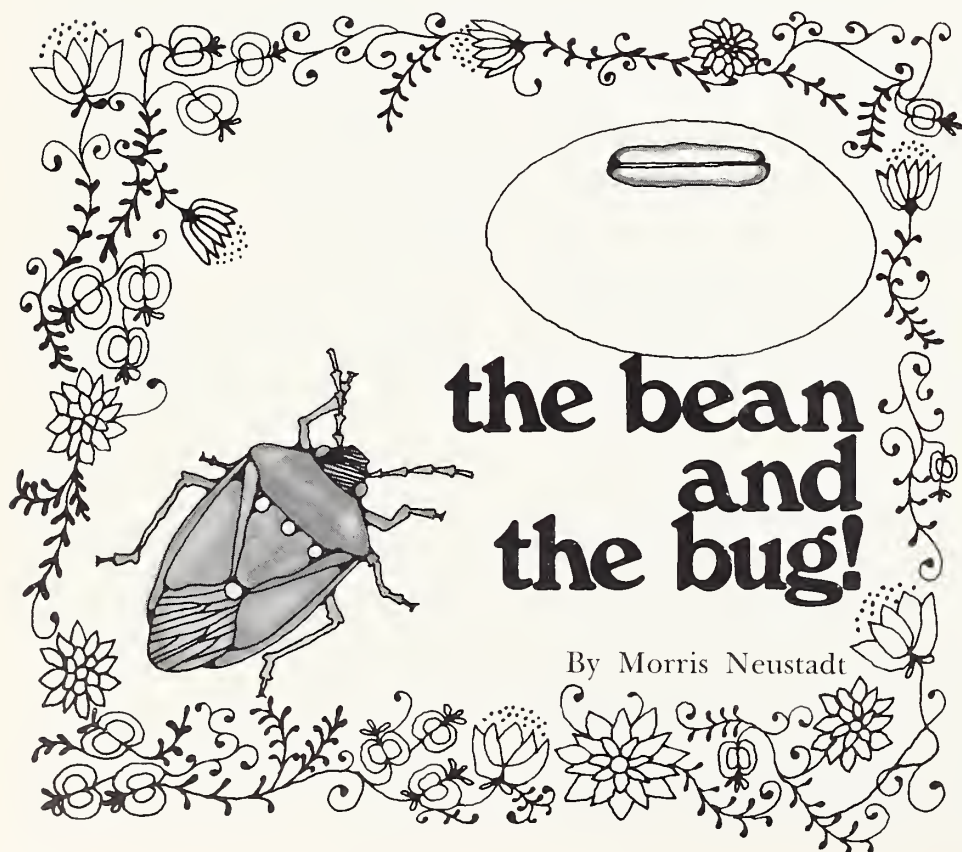
*The primary value of the soybean is its high protein content. Soybean meal is a major item in the diet of fast-growing broilers, fryers, turkeys, and some kinds of livestock. Soybean oil is used in producing hydrogenated shortening, margarine, and salad oil. Soybeans are also being used in an increasing number of food products to add to their protein content.*

With the test results in, standardization specialists in C&MS' Grain Division were then confronted with the problem of how to transfer these findings into meaningful grade standards. It was concluded that the presence of 8 to 10 percent of kernels damaged by stinkbugs resulted in only a small decline in the economic value of the soybeans.

As a result, the Grain Division proposed to revise the standards for soybeans to include the provision that, for grading purposes, stinkbug-damaged kernels should be assessed at one-fourth the rate of kernels damaged by other factors. The Grain Division worked closely with the soybean industry in developing this recommendation. The industry concurred and the new provision was included in the soybean standards, effective September 1, 1969.

The revised provision for stinkbug damage solved a difficult marketing problem for buyers and sellers of soybeans. □

*The author is Head, Standardization Section, Standardization Branch, Grain Division, C&MS, USDA.*





# THE COMMITTEE MAKES IT CLICK

By R. Dee Smith

A MARKETING ORDER is like a house. A house doesn't become a home until a family moves into it and gives it life and meaning. A marketing order is merely an enabling measure and doesn't have effect or meaning until an administrative committee puts it into operation.

Each fruit, vegetable, or specialty crop marketing agreement and order program is managed and operated by an administrative committee composed of leaders of the particular commodity industry. They are nominated by other producers and handlers within their industry and appointed by the Secretary of Agriculture.

Committeemen are selected by their friends and associates as representatives who have the experience, the ability, and the desire to make their marketing order work. Federal marketing agreements and orders are self-help programs initiated, designed and operated by growers and handlers to build stable, orderly markets for their crops.

The type of committee established depends on the nature of the program. Some committees are composed only of growers, others include handlers, and still others may be made up of growers, handlers and processors.

Also, some marketing orders have a grower committee and a handler committee with the handlers acting in an advisory capacity to the growers.

The marketing order also specifies the term of office for committee

members and their alternates. Some committees are appointed for one year or perhaps two years with the terms of all the members expiring at the same time. Other committees have staggered terms for their membership, with one-half or one-third of the terms ending in alternate years.

The sizes of the committees vary, too, depending on the area the order covers, or the number of persons involved. The committees are small enough to function effectively, but large enough to fairly represent those concerned.

Every year the administrative committee meets and draws up a marketing policy. This policy is a guide for the marketing order and outlines the goals of the industry for the upcoming season.

In establishing a marketing policy, a committee must determine the supply available for marketing in the upcoming season and how much demand there will be for it.

The committee then decides upon actions which will best carry out their marketing policy within the framework of their marketing order. Some committees recommend regulations on grade, size, maturity and quality; others recommend rate-of-flow regulations to avoid gluts and shortages in the marketplace; and still others recommend volume control regulations which will allot a sufficient amount of a crop to fill domestic channels and then divert surplus quantities to other, non-competitive outlets.

The committees' recommendations are sent to the U. S. Department of Agriculture. Marketing specialists within USDA's Consumer and Marketing Service review the recommendations to make sure they come within the scope and authority of the marketing order program.

When the Secretary of Agriculture is certain that the recommendations will be beneficial to the industry and not harmful to the public, he then issues them as regulations, and they become binding on all handlers who operate under the marketing order.

In addition to its duties in relationship to USDA, the administrative committee handles the local, day-to-day business of the marketing order program.

The committee analyzes growing and marketing conditions, and keeps growers and handlers informed about any regulations, policies or meetings it may set up. The committee also is responsible for investigating and reporting violations of the marketing order to USDA.

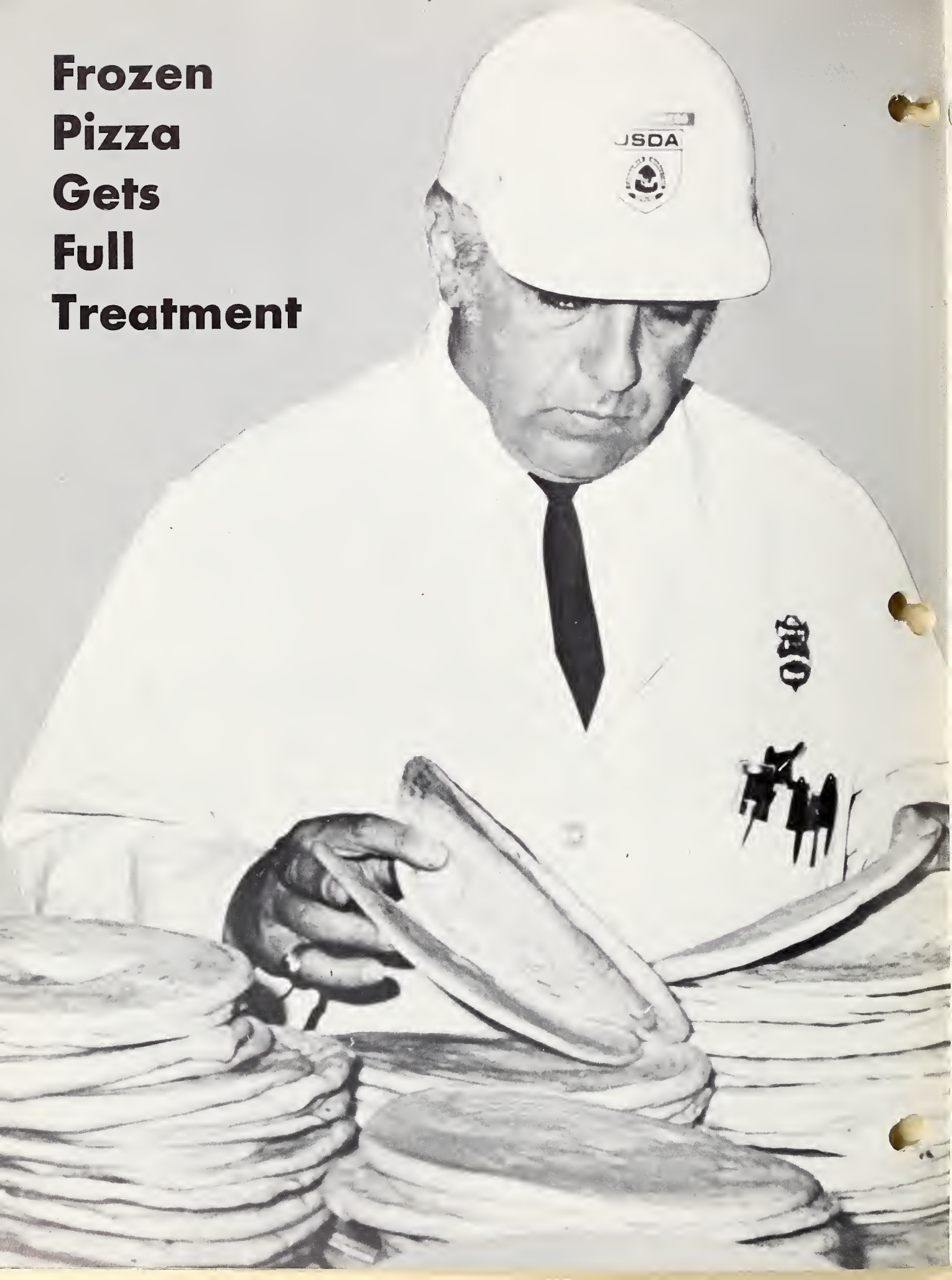
A budget is developed to fund the operation of the marketing order. The budget covers the costs of office space and staff personnel, research and market development projects, and other expenses likely to be incurred in operating the marketing order.

Funds for the budget are obtained through assessments on a typical unit of shipment, such as a box, ton, or carload. The recommended budget and rate of assessment must be approved by the Secretary of Agriculture before they are put into effect.

The committee is the guiding force within the marketing order program. The members maintain liaison with USDA; they are spokesmen for their industry; and they keep the work of the program going day-to-day. When a marketing order works, it's the committee that makes it click. □

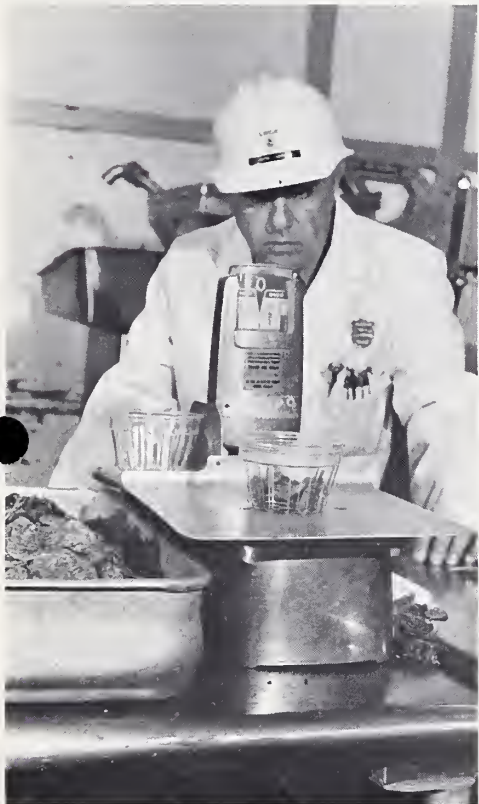
*The author is a marketing specialist, Fruit and Vegetable Division, C&MS, USDA.*

# Frozen Pizza Gets Full Treatment





Frozen pizza—with pepperoni, sausage, or other meat products added—gets the full inspection treatment from the U.S. Department of Agriculture's Consumer and Marketing Service. Left, food inspector James Ebbess inspects pizza crusts for possible black flecks caused by baking deficiencies. Crusts come from federally approved bakeries to make sure they were baked under sanitary conditions. Below, federally inspected pepperoni is rechecked for wholesomeness and weighed to insure that the proper amount is always on the pizza you buy.



Everything is inspected for sanitation, from the conveyor line, scoops and table top to the hands and uniforms of the personnel. After the meat is put on a cellophane wrapper (upper right), it moves along a conveyor line where the wholesome sauce and cheese mixture is scooped on top. One of the major functions of inspection is to check label accuracy. Ingredients must be listed from the one weighing the most to the one weighing the least. That way you can be assured of what you're buying.



THE PRIMARY GOAL of the meat and poultry inspection legislation passed in the last two years was to provide the United States with a uniform system of inspection for these products, whether they were sold across State lines or within a single State. In achieving that goal Federal-State cooperation is an indispensable factor as the States strive to bring their programs up to Federal standards.

In fact the preambles to both these laws—The Wholesome Meat Act and the Wholesome Poultry Products Act—specifically call for “cooperation with appropriate State

ington offices of USDA’s Consumer and Marketing Service, where these specialists work.

Consumer Protection Program officials responsible for laboratory operations first wrote to all State inspection agencies offering assistance. C&MS specialists then toured laboratory facilities in most of the States to evaluate particular needs.

This survey shows that some States have modern laboratories which, with additional manpower, will be able to handle the increased workload which the new inspection laws require. Other States may need additional personnel as well as new

programs, the States also must develop specialists in plant design and layout. These technicians must approve blueprints of proposed plants to be sure the new facility is properly designed to turn out sanitary products.

With this goal in mind, many States send men to gain on-the-job experience in evaluating the plans. The State blueprint examiners are also treated as regular C&MS employees during their tours in Washington and, for example, sit in on conferences with architects and help C&MS personnel evaluate plans which meat packers submit.

In most cases, having a blueprint appraiser on its consumer protection staff is a new experience for the States. For this phase of an inspection program, C&MS provides on-the-job training and later serves as a source of assistance on subsequent problems once the State personnel get back to their jobs.

Many State inspection programs already include a label approval system, often patterned after the C&MS operation. Over a dozen States, some with labeling programs that need refining, others without any program, have sent staff members to learn techniques from C&MS experts who process over 100,000 labels each year.

State label specialists, as well as State personnel in other inspection functions, generally stay for 2 to 6 weeks. As a rule their responsibilities increase with the length of their stay to the point that the State personnel evaluate labels or blueprints or conduct laboratory tests on their own before returning home.

This brief period of work on the Federal level does give a sense of partnership to the State personnel and the knowledge that expert advice is available should problems develop back in their States. The overall effort is an important step in the direction of a uniform national inspection program. □

*The author is Director, Technical Services Division, C&MS, USDA.*

## Communication Lines Open For Uniform Inspection

By Dr. Jack C. Leighty

agencies” by Federal officials.

In the relatively short time since the laws were passed, this cooperation has manifested itself in several ways. For example, many States have sent various inspection personnel to the U.S. Department of Agriculture to refine their skills as required by the new legislation.

Although many States have had functioning inspection programs, most have lacked specialists in certain support phases of inspection. In order to have their programs qualify as “equal to” the Federal program, which the laws require, the States have to develop experts in label approval, blueprint evaluation, and laboratory analysis, for example.

Since these crafts have been part of the Federal inspection program for many years, a likely place to assist State personnel is in the Wash-

ington offices of USDA’s Consumer and Marketing Service, where these specialists work.

To develop these skills in their personnel, many States send a laboratory specialist to Washington. There the State scientists, working side by side with C&MS chemists, bacteriologists, and pathologists, can acquire the expertise to help their State bring its inspection program up to Federal standards.

In cases where a State has no laboratory, a C&MS expert can advise the State on just what equipment, space, and personnel will be necessary. Guidebooks and other information gathered through years of meat inspection laboratory work are also made available to the States.

As they modernize their inspection





## DOES YOUR CHICKEN MONEY ADD UP?

**D**OES THE MAGIC WORD "S A L E" draw you toward a store almost as swiftly as you read the ad? Do you comb the morning newspapers looking for those shouting letters, and do you rush down to the department store the day after Christmas in anticipation of them?

If this is you, then you know from the crowds that greet you, you are not unusual. All of us hope to find a good buy—top quality at a low price. But in your haste to find the obvious "good buy," do you sometimes overlook the everyday savings? Try this test.

Your family's favorite dinner is crisp fried chicken, and it's one of your culinary specialties, too. You are always on the lookout for a sale on chicken, and today you discover there is one. You rush to the supermarket, pick up the pre-packaged drumsticks and breasts (your family loves drumsticks and breasts. If only chickens were hatched with 4 legs and 2 breasts!) and come home happy with your purchase. If you do, then you may not have made the best choice.

Although chicken is generally a good buy, it is wise to check the quality and class of your bird. The U.S. Department of Agriculture's Consumer and Marketing Service grades whole chickens and chicken parts for both quality and class. The grading of individual chicken parts has increased greatly this past year, so you should now see the USDA quality grade shield on more cut-up chicken in your market.

The highest table quality is USDA Grade A. The USDA Grade A shield on chicken guarantees the buyer that she has purchased a fully fleshed and meaty bird—one that is attractive in appearance and free from defects. The class-names "fryer," "broiler," or "roaster" tell her that the bird is young and tender.

But many housewives today are already USDA quality conscious. How many of us, though, know when chicken parts are as good a buy as the whole bird?

The old geometry law—the whole is equal to the sum of its parts—does not always apply to chicken prices. Chicken sold whole generally costs a few cents per pound less than cut up chicken. You would naturally expect this since you are charged a few cents for the cutting service, and, of course, if you buy only the meatier parts such as the leg or breast, you must expect to pay more per pound than for a whole chicken. Occasionally, though, chicken parts *are* as good a buy as the whole bird, and a recent publication of USDA's Agricultural Research Service, "Family Economics Review," has a chart which gives a guide to these bargains. (You can see this chart at the end of the story.)

Now, let us return to that sale at your local supermarket. Pick up those drumsticks and breasts again. If the whole chicken is selling for 35 cents a pound, then chicken breasts are an equally good buy at 49 cents a pound, and drumsticks for 43 cents a pound. If the breasts and drum-

sticks are selling at prices less than this, you are actually getting more meat for your money, and the parts are a better bargain than the bird. But if the prices are higher, as is usually the case, you would save yourself money if you bought the whole chicken.

"But if I bought a whole chicken, what would I do with the back, neck, and wings?" you think.

Try simmering or stewing those parts in water so that the meat will separate easily from the bone. The broth with its bits of chicken can be made into an excellent soup by the imaginative addition of vegetables and seasonings. If you don't happen to like soup, then the chicken pieces could be used in a casserole dish, in a chicken pie, or even in an exotic dinner of chicken curry with rice.

But perhaps the only chicken dish your family loves is fried chicken. Then it would be best for you to wait until these parts are being sold at good prices. A whole chicken is hardly a bargain if there are parts of it that are not well liked by your family.

However, for many of us, chicken is a favorite in any dish. Knowing when to buy chicken whole and when to buy the parts can stretch your household budget just a little bit further. Better yet, this is a bargain you yourself can spot without having to scan those newspaper ads. You won't have to wait for that next "S A L E" to save money. □

Price per pound of whole chicken fryer, ready to cook, and of chicken parts providing equal amounts of edible meat for the money.

If the price per pound of whole fryers, ready to cook, is ---- (Cents)	Chicken parts are an equally good buy if the price per pound is ----				
	Breast half (Cents)	Drumstick and thigh (Cents)	Drumstick (Cents)	Thigh (Cents)	Wing (Cents)
27	38	35	33	36	21
29	41	37	36	39	23
31	44	40	38	41	25
33	47	42	41	44	26
35	49	45	43	47	28
37	52	47	46	49	29
39	55	50	48	52	31
41	58	53	50	55	33
43	61	55	53	57	34
45	63	58	55	60	36
47	66	60	58	63	37
49	69	63	60	65	39
51	72	65	63	68	41
53	75	68	65	71	42
55	78	71	68	73	44

# Breaking Ground for Better Potatoes

By Laurence E. Ide

**U.**s. NO. 1, TO MOST consumers, means just one thing—potatoes.

More potatoes are marketed by grade than any other fresh fruit or vegetable. Potato growers and shippers use the potato grade standards to market their product in wholesale channels, and U.S. No. 1, the grade into which the majority of potatoes fall, is the grade name on fresh produce most familiar to consumers.

But something's been happening in the last few years. Many consumers complain that a bag of U.S. No. 1 potatoes has too wide a mixture of sizes, the potatoes aren't always clean, and cuts, bruises, or other defects cause too much waste.

Some potato growers and shippers, too, believe the U.S. No. 1 grade covers too wide a range of quality. With modern cleaning and sizing equipment, and careful sorting of potatoes to remove those with defects, many progressive packers are shipping a product of better quality than that now required by the standards for U.S. No. 1 grade.

The National Potato Council, representing potato growers, has devoted considerable attention over the past several years to how the grade standards might be improved. As a result, the Council recommended a number of changes in the potato standards to encourage the marketing of a better product.

Against this background, the U.S. Department of Agriculture has proposed a revision of the U.S. Standards for Grades of Potatoes that

would reduce the percentage of defects allowed, tighten the requirements for cleanness, and encourage greater uniformity in the size of potatoes in retail packages.

U.S. grade standards for potatoes and other agricultural products are developed by USDA's Consumer and Marketing Service. Originally established to aid in long-distance trading—so wholesale buyers in the East and shippers in the West, for example, could bargain with confidence about a specific quality of product—the grades still serve the purpose of helping to establish the value of agricultural products. Pricing by quality usually carries through to the retail level, whether or not a grade is shown on the product.

Some of the consumer dissatisfac-

tion with the quality of fresh potatoes is seen in the increasing use of processed potato products—frozen, canned, or instant mashed potatoes—and other convenience foods. Consumption of fresh potatoes has shown a steady downward trend for many years. In 1956, for example, about 81 percent of the potatoes used for food were consumed fresh, as compared to 54 percent in 1968.

Although use of the U.S. grade standards and official certification of the quality of potatoes is voluntary, more potatoes are inspected for quality than any other fresh fruit or vegetable. Last year, the Federal-State Inspection Service, operated by C&MS in cooperation with State agencies, certified at shipping point the quality of about 65 percent of

*The present U.S. No. 1 grade has a minimum size requirement of 17/8 inches, but no maximum. The wide range of sizes shown here (2 to 18 ounces) may frequently be found.*





the potatoes that were marketed fresh. Growers or packers who use the inspection service must pay a fee for it.

Use of the grade name on packages of potatoes does not necessarily mean that the potatoes have been officially inspected, however. Unlike meat and most other food products, which, under law, must be officially graded if they are to carry the U.S. grade mark, containers of fresh fruits and vegetables may be marked with the grade name even though the product has not been officially inspected and certified as to grade.

Revising the potato grade standards, to meet changes in production and marketing practices and consumer preferences, is the work of the C&MS Fruit and Vegetable Division. Standardization specialists work closely with members of industry to determine what is practical. The standards should not be so strict that the cost to sort, wash, and size potatoes would be prohibitive. On the other hand, the range of grade standards should reflect the range of qualities actually being marketed, and should be designed to help the ultimate buyer (the consumer) choose the quality he wants.

Taking all these factors into consideration, the Fruit and Vegetable Division drew up a proposed revision of the potato standards, for study by members of the potato industry, consumers, and others interested in the marketing of potatoes.

The proposal was published in the October 22, 1969 *Federal Register*, and comments on it will be accepted until May 1, 1970. USDA will then decide, on the basis of all comments received, whether or not to issue the revised standards.

Essentially, here is how the proposed revision would change U.S. No. 1 grade:

- It would reduce the "tolerances" for defects allowed, so that there would be fewer potatoes with cuts, bruises, or sprouts in consumer packs and particularly potatoes so damaged that the defect causes more than 10 percent waste.

- It would require that potatoes (except those marketed as "new potatoes") be more mature than those that may now be marketed as U.S. No. 1. These more mature potatoes would be more resistant to skinning, would be less likely to be shriveled, and would keep better.

- It would require that potatoes in consumer packs be largely free from dirt or staining, with little loose dirt in the containers.

- The minimum size of U.S. No. 1 potatoes would be increased to 2 inches in diameter or 4 ounces in weight, if the size of the potatoes is not otherwise indicated on the label. In addition, the proposed standards set up size designations, such as "Medium" or "Large," which may be used if the packer wishes. If potatoes were labeled with the designation "Medium," for example, the size

of potatoes permitted would range from  $2\frac{1}{4}$  to  $3\frac{1}{4}$  inches in diameter or from 5 to 10 ounces in weight.

The proposal also would replace the present top grade—U.S. Fancy—with a new grade, U.S. Extra No. 1. U.S. Fancy grade was seldom used because the requirements were too strict.

U.S. Extra No. 1 potatoes would be the premium grade for consumers who want to buy the best. The tolerances for defects would be stricter than those for U.S. No. 1, and the potatoes could have no internal defects or sprouts. The minimum size would be  $2\frac{1}{4}$  inches in diameter or 5 ounces in weight, and the variation in sizes of these potatoes would be no more than  $1\frac{1}{4}$  inches or 6 ounces.

Many of the proposed changes reflect not only what consumers want, but practices now prevalent in many potato production areas. All potatoes are now sized, and in most areas, a large percentage of shippers pack potatoes sized to a 2-inch minimum diameter. In potato growing areas where soil adheres to potatoes when they are dug, the potatoes are washed. If they are grown in sandy soil, potatoes now are brushed before marketing. The proposed revision does set stricter tolerances for defects, so shippers would need to sort potatoes more closely to meet the grades. This would provide consumers with the better quality they have been asking for.

As one consumer wrote recently, "I would be willing to pay more for good potatoes if I could get them . . . if they were marked to indicate such quality."

Comments on the proposed revision may be sent to the Hearing Clerk, U.S. Department of Agriculture, Washington, D. C. 20250, until May 1, 1970. Copies of the proposal may be obtained from the Fruit and Vegetable Division, C&MS, USDA, Washington, D. C. 20250. □



*The proposed standards provide new size classifications which packers may use. "Medium" size, below, would weigh from 5 to 10 ounces or be  $2\frac{1}{4}$  to  $3\frac{1}{4}$  inches in diameter.*

*The author is Head, Standardization Section, Fresh Products Standardization and Inspection Branch, Fruit and Vegetable Division, C&MS, USDA.*

# Food Donation Store: Distributor of Donated Foods

AS MANY PEOPLE CANNOT buy all the food needed for good meals, the U.S. Department of Agriculture is helping them through the Commodity Distribution Program. USDA sends food to counties, towns, and cities that ask for help in feeding people who need it.

The Commodity Distribution Program aims to get commodities to recipients quickly and courteously. Most local communities distribute foods "over the counter" to one recipient family at a time. This method, though effective, is time-consuming and the recipient often feels he has no choice in selecting the foods. To allow recipients to choose the foods they like and will use, USDA recommends that the

self-service method of distributing foods be used nationally.

A few years ago Washington State introduced the food store or self-service concept, which the State used extensively before it changed to the Food Stamp Program because it proved economical and quick. It maintains the familiar supermarket atmosphere. This self-service method is adaptable to most operations.

Here are some good suggestions that may be used in planning a community's self-service food donation store:

1. The store should be tightly constructed, waterproof, rodent and insect-proof, and well ventilated.

2. Floors should be smooth for easy use of equipment.

3. Screens should be used on windows and doors.

4. Use good lighting.

5. The best rodent and insect prevention is to have the building constructed so as not to allow nesting.

6. Design the floor plan so that there are separate shopping and storage areas. The shopping area should have a reception section for check-in, identification, and information. At the check-out section shoppers' selections are checked by a clerk for the right quantities and types.

Additional information regarding the Food Donation Store may be obtained from: Commodity Distribution Division, Food and Nutrition Service, U.S. Department of Agriculture, Washington, D.C. 20250. □

## Milk Orders Move With the Times

BULK TANK TRUCKS hauling milk from the farm to the city have largely replaced shipments in cans. And with improved transportation and refrigeration, milk destined for our dinner tables may travel hundreds of miles to reach us.

Dairy farmer cooperative associations are getting bigger and bigger with far-reaching effectiveness in bargaining for their members.

Consumers now are likely to buy milk in half gallons instead of in quarts. Store sales of milk are increasing, home deliveries decreasing.

While these and other changes have been taking place in the channels milk travels, the Federal milk marketing order program, administered by the U.S. Department of Agriculture's Consumer and Marketing Service, has been changing too.

For instance, there is a growing significant trend toward fewer milk

orders which cover ever-widening marketing areas. Benefits from the orders are reaching out to more and more people.

Figures projected through December 1969 reveal that around 134 million American consumers now have access to milk supplied through dealers regulated by USDA milk orders. The marketing areas include most of the Nation's major population centers.

Three-fourths of all bottling quality (Grade A) milk dairy farmers produce and sell goes to milk dealers who pay the farmers supplying it at least the minimum prices set by the 68 Federal milk marketing orders.

According to USDA's Consumer and Marketing Service, an average of 143,608 farmers during the past year delivered an estimated 61.4 billion pounds of milk—about 14.3 billion half gallons—to milk dealers

doing business in Federal order markets.

As the milk left the farm, at this first level of trade, it was valued to the farmers at about \$3.6 billion at minimum milk order prices.

Federal milk marketing orders were authorized by law some 30 years ago. Their basic aim is to maintain orderly marketing conditions between dairy farmers and milk dealers, so as to keep an uninterrupted flow of fresh milk available for consumers' needs.

A milk order is put into effect only when two-thirds of the dairy farmers supplying a market approve the order, and it may be voted out by dairy farmers at any time.

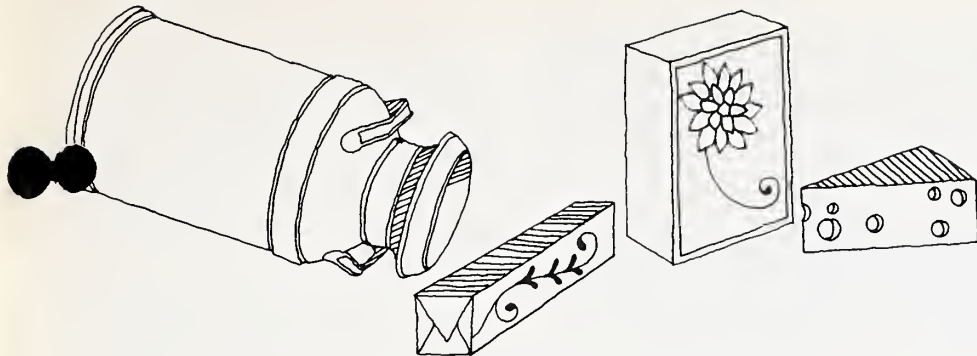
The market stability which orders provide stems from the minimum prices to farmers—the least that dealers can pay dairymen from whom they buy milk. □

### PLENTIFUL FOODS FOR JANUARY

A golden glow of oranges, orange products, and fresh grapefruit tops the U.S. Department of Agriculture's Consumer and Marketing Service's Plentiful Foods List.

Other abundant items include apples, fresh winter and canned pears, broiler-fryers, canned tomatoes and tomato products, dry peas, dry beans, and lentils. □





## IMPROVING QUALITY STANDARDS FOR MANUFACTURING MILK

By Herbert L. Forest

**B**ETTER QUALITY butter, cheese, nonfat dry milk, and other dairy products, with better keeping ability, may be on the way.

A step in that direction is a revised set of recommended standards for manufacturing milk—the raw material for such dairy products—being proposed by the U.S. Department of Agriculture.

The better the raw material is, the better the final product, assuming good manufacturing processes. Hence, there is the proposal to help States, which have the primary responsibility, raise the quality of manufacturing milk.

The revised standards, proposed for State adoption and enforcement, are the result of a cooperative effort between USDA's Consumer and Marketing Service and two agencies of the U.S. Department of Health, Education, and Welfare—the Public Health Service and the Food and Drug Administration.

These standards are modeled closely after those developed in a continuing USDA-State-industry project stretching over many years. The new proposal, however, is intended to unify the earlier standards issued in 1963, with proposals of other government agencies and thus help eliminate overlapping, duplicate, and conflicting requirements.

Major additions to, or changes in, the earlier standards are:

- Lowering the bacterial limit for "acceptable quality" manufacturing milk. The bacteria limit in the proposed standards would be retained for three years after adoption by a State. Then the limit would be lowered to one-third of that level. It is expected that processing plant field-

men and State extension workers will help farmers improve sanitation to meet this requirement.

- Requiring more stringent regulations for farm water supplies.
- Requiring the abnormal milk test program prescribed by the National Mastitis Council.

Retained in the newly proposed standards are provisions of the 1963 standards which provided for:

- Farm inspection and certification, including checks on health of dairy herds, milking facilities and procedures, sanitation of utensils and equipment.
- Inspection of incoming raw milk at processing plants for odor, appearance, bacteria, and sediment.
- Plant licensing, requiring adequate procedures and facilities for sanitation.

USDA officials emphasize that the proposed standards are for voluntary adoption by States which have no such regulations in effect or which have less stringent regulations. Some States, they point out, already have equal or better regulatory laws, and many dairy farmers and milk processing plants already meet or exceed the proposed requirements.

Nevertheless there are some areas of the country which lag in milk quality. Since 30 percent of all milk produced in the Nation is produced specifically for manufacturing use, deficiencies by some producers in some areas can have a far-reaching effect on the general level of the Nation's dairy products.

The proposed standards, if adopted and enforced by the States, will require dairy farmers who do not meet the recommended requirements to improve the quality of the

milk they offer for sale to processing plants. Most farmers will not find it too difficult or costly to do so. Dairy specialists state that the greatest need for improvement is in general house-keeping and production techniques.

The proposed standards, when adopted, would also correct deficiencies in processing plants. These are often related to such practices as refilling large storage tanks before they are completely emptied and cleaned and insufficient cooling of milk in storage. Another problem, in some areas, is a long run between farm and processing plant which may permit bacteria build-up during transit.

USDA dairy specialists have been meeting with State regulatory officials to examine problems of dairy farmers and processing plants and consider the steps that would be necessary to bring milk quality and farm and processing plant practices up to the level of the proposed standards. In several regional meetings, they also discussed how the quality standards and farm requirements could be applied in cases where milk is shipped across State lines.

State officials, as well as producers, processors, and anyone interested, now have opportunity to comment on the proposed standards. The extent to which they are adopted and enforced by the States will determine the effect they will have in assuring a continuously wholesome and high-quality supply of dairy products for American consumers. It could be a long step forward. □

*The author is Director, Dairy Division, C&MS, USDA.*





## U.S. Cattle Thailand-Bound

**C**ATTLE TALK TAKES the spotlight when a Thailand "cowboy" and a Texan get together.

The visit this fall of Chokchai Bulakul of Thailand to the W.W. Callan Ranch at Waco was more than social—he took back to his country some 400 Santa Gertrudis and Brahman cattle from the Callan Ranch and 16 other ranches scattered throughout Texas. All of the cattle were "outstanding representatives of their breed," according to Paul Fuller of the U.S. Department of Agriculture's Consumer and Marketing Service, Washington, D.C.

Mr. Callan, prominent Waco rancher and banker, raises purebred Santa Gertrudis cattle and is active in promoting the breed throughout the world. He met Mr. Bulakul on one of his promotional visits last year which took him to the Chokchai Ranch located about 100 miles north of Bangkok. He succeeded in interesting the Thailer in the Santa Gertrudis breed and Mr. Bulakul's subsequent purchase represented the first cattle sale financed through USDA's Commodity Credit Corporation export sales program.

This CCC program enables a U.S. exporter, who gets CCC approval, to sell agricultural commodities to a foreign importer on a deferred payment basis. Payments may be deferred for periods up to a maximum of 36 months. The program also assures the seller payment for the cattle and guarantees the buyer that the animals he receives are of the specified quality.

To certify the quality of the Thai-

land-bound purchase, Mr. Fuller, of the C&MS Livestock Division, examined each of the 408 cattle to see that they met the requirements for weight-for-age, conformation and purebred registration—as required for compliance with CCC export financing. Veterinarians with USDA's Agricultural Research Service made sure that the animals met the health requirements for export.

Mr. Bulakul will use these animals to increase the quality of his native herd in Thailand. He currently has about 6,000 head of cattle on his 15,000-acre ranch—the largest in Thailand—and hopes to increase numbers to 20,000 in six years.

To protect and increase his herd, Mr. Bulakul returned with enough vaccine to inoculate 1,000 animals against brucellosis. The disease infects 50 percent of the cattle in Thailand, and he is hopeful the vaccine will prove effective in combating the virus.

The animals were all under one year, except for a two-year-old 2,000-pound Santa Gertrudis bull named Chang Dang—or Red Elephant.

Mr. Bulakul feels that the crossbreeding of his native herd with the Santa Gertrudis and Brahman will be ideal for the Indian-like Thai climate. The Brahman breed actually originated in India, while the Santa Gertrudis was developed on the King Ranch in South Texas from crosses between Shorthorn cows and Brahman bulls.

Right in line with the cowboy picture, the Thai rancher and businessman has about 20 horses—Quarter Horses and Arabians. He proudly reported that his Quarter Horses are the only animals of their breed in the country.

The Texas influence will still be felt even after the cattle arrive in Thailand. Mr. Callan plans to visit the Chokchai Ranch soon after the cattle are unloaded to help Mr. Bulakul set up his breeding program. □





# A Statistician Looks at Standardization

*(Part 1 of 3 Parts)*

By Richard P. Bartlett, Jr.

THE COMPLEX WORLD of marketing relies to a great extent on standardization of the product marketed and on determining and describing the various qualities of the products being sold.

The process of describing the qualities of agricultural products is known—from the producer up through the consumer—as “grading.” The familiar “USDA Choice” grade shield on beef, “U.S. Grade A” on poultry and canned fruits and vegetables, and the “U.S. Grade AA” on eggs and butter are all grade marks which can give the consumer, the producer, and the retailer an idea of the quality of these products.

Statistical support for grading is a fairly recent development in the history of the half-century-old grading program, but it is becoming in-

creasingly important. Hardly more than a decade has passed since the first statistical sampling plan for grading was developed.

As quality control tightens and requirements become more exacting, the grading program requires more sophisticated techniques and measuring devices. The statistical approach answers many of the needs of a modern grading program. Such terms as: “grading by attributes,” “AQL’s,” “OC curves,” and “acceptance number” are being used more and more by graders, as statisticians become more involved in the program.

In this series of articles, we will explain the role of the statistician in grading: first, his help in developing standards; second, what we mean by “attribute standards,” and third, how statistical sampling is used in

grading.

Grading is provided by the Consumer and Marketing Service of the U.S. Department of Agriculture on a voluntary, fee-for-service basis. If producers, packers, processors, or others want to use the grading service, they pay a fee to reimburse the government for its expenses.

The grade mark actually tells the level of quality of a product—in a spectrum ranging from the highest quality to the lowest. “USDA Prime” on a beef roast, for instance, shows that it’s the highest quality beef available, while “USDA Choice” shows the second highest quality.

Some products, like beef, require a large number of different grades to distinguish the differing qualities (C&MS has eight grades for beef, only three or four of which are used at retail), while other products, because of their greater uniformity, require only two or three grades. Poultry and most processed fruits and vegetables are typical of this latter group, with U.S. Grade A as the highest quality and U.S. Grades B and C as lower qualities.

To determine the levels of quality in any product and to identify the grades so they may be applied to the product, C&MS quality specialists develop comprehensive standards. These standards describe the quality factors that determine each grade and insure that grades are applied uniformly throughout the country. A broiler-fryer graded U.S. Grade A in California must be the same quality as one graded U.S. Grade A in New York. Standards provide the quality definitions that make this so. They are, in other words, the “dictionary” that defines the meaning of each grade so that grading does indeed make it possible for people in the food business to speak a common language.

In this area, the development of standards, the statistician can be, and for a number of products has been, a significant help to the specialists.

The first step in developing a standard is to find out what kind of product is being produced. We must know what the general run of quality is, what different levels of quality exist, what factors indicate those

levels, and what buyers (retailers, consumers, and others) want in the product.

Statisticians first draw up a basis for determining the qualities being produced: plans for drawing samples of the product in various parts of the country, criteria for evaluating quality, and a mathematical means of evaluating the information found.

If we (the statistician working with the quality specialist) are developing a standard for grapefruit, for instance, we must draw random samples of grapefruit from a number of packing houses. We must know what quality factors to look for when drawing samples. And we must have some way of quantifying our results—that is, what percentage of the sample has certain defects or what gradations of color exist within a sample.

From this information, quality specialists then draw up tentative standards for the product. The next question is: Do they work?

Again the statistician can help. As the tentative standards are put on trial in actual operations, he can help insure the validity of the testing procedure. With proper sampling techniques, statistical evaluation and valid measurement of the product, he can assure that standards that work in a number of limited trials will also work in actual practice when the standards are adopted.

The statistician's goal in standardization development is:

1. To help make the procedure as scientifically sound as possible.
2. To provide, where possible, uniformity in grading procedures between products.
3. To develop standards that reflect the quality actually being produced and that can be applied as easily as possible by Federal or Federal-State graders.

The next article in this series will describe how statisticians can provide a scientific basis for application of grade standards—what is meant by “grading by attributes.” □

*The author is Director, C&MS Statistical Staff, C&MS, USDA.*

I'VE BEEN CALLED MANY things in my day — a “ground nut,” a “ground pea,” even a “goober pea!” I came to your land in the hold of European ships back in the sixteenth century and, with the colonists of that time, I made my home in the deep South. At first, I wasn't very highly regarded—I remember the time Tom Jefferson implied that my commercial value left something to be desired.

But you just didn't know me well enough then. You didn't realize that I could offer stores of the essential A, B and C vitamins, as thiamin, riboflavin, niacin, carotene and ascorbic acid, not to mention the energy-rich balance of protein and calories.

And such versatility! Once I was just feed for the hogs . . . that is, after all the oil had been pressed out of me for use in your homes. Then I began social climbing—I was a great hit during the Civil War when vendors roasted me on street

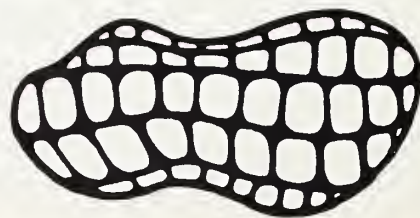
corners. Hungry Yanks would pop me into their mouths or pocket me to plant on their farms up north.

My real breaks came in the late nineteenth century. In 1880, a factory was built in Virginia to grade, clean and polish me. And when the boll weevil waged its war of destruction on the cotton crops, George Washington Carver of the Tuskegee Institute discovered more than 300 uses for me and urged farmers to substitute me for King Cotton.

From that time on, I was catered to hand and foot . . . or, shall we say, shell and kernel? Equipment was invented to plant me, cultivate me, harvest, pick and shell me.

In 1890, a St. Louis doctor discovered one of my most popular forms—peanut butter—while looking for an easily digested, high protein food for his patients. Now, more peanuts go into the manufacture of peanut butter than any other peanut product. But nutrition and peanut butter are really a story in them-

# the peanut earns his bread & butter.





selves . . .

Every peanut product consistently maintains a three-way reputation for popularity, dependability and nutrition. At one time, for instance, producer Billy Rose hit such a low spot in his theatrical career that he had only 15¢ on which to live for three days. "I simply bought three 5¢ bags of peanuts and ate one each day," he said. "And do you know something, I made out just fine."

Peanuts may be a nutritive powerhouse when it comes to supplying the human need for food, but vitamins are not the only reason that your child and peanut butter have become such friends. It has taste appeal. Astronaut Gordon Cooper even brought bite-size peanut butter sandwiches with him into space. And nearly 16,500,000 American peanut butter sandwiches are eaten every day!

The U.S. Department of Agriculture acknowledges both the nutritive value and popularity of peanut butter by incorporating it into the commodity distribution programs for needy persons and school lunches. During fiscal year 1969, USDA bought over 49 million pounds of peanut butter—more than 17 million for the School Lunch Program, and almost 32 million for the Needy Persons Program. The U.S. armed forces made additional purchases.

And you, of course, recognize the value of peanut butter every time you feed it to its biggest little consumer . . . the American child.

Manufacturing peanut butter is a process that starts long before you see the glass jars on your grocer's shelf.

First the raw peanuts must be properly dried, cleaned, and shelled. The shelling process includes much more than the actual shell removal. The peanuts are screened to remove split kernels and smaller sized kernels. They are sorted to remove defects, and they are inspected and certified for quality by Federal-State inspectors. The still partially "dressed" peanut (with skin left on) next moves to the peanut butter processing plant.

There are approximately 25 such plants in the U.S. and a number of them contract to sell peanut butter

to USDA and the U.S. armed forces. When processing peanut butter for sale to the government, these plants must operate under in-process inspection by USDA's Consumer and Marketing Service.

USDA and the armed forces have essentially the same requirements for the quality of peanut butter, based on standards for U.S. Grade A peanut butter developed by the C&MS Fruit and Vegetable Division. They also require that the peanut butter contain a minimum of 90 percent peanuts.

U.S. Grade A (or U.S. Fancy) peanut butter for government procurement is made from U.S. Grade No. 1 shelled peanuts and rates high in color, consistency, absence of defects, flavor and aroma. "Good color" refers to the rich hue of peanut butter prepared from properly roasted peanuts. Peanut butter of "good consistency" is spreadable, neither too thin nor too stiff. And peanut butter with "good flavor and aroma" tastes and smells like freshly roasted and freshly ground peanuts.

The peanut butter processing plant is a multi-faceted operation. Here, the shelled peanuts are roasted until they reach a suitable color. In a sense, the peanuts are "unbut-toned" during roasting—that is, their skins are loosened and readied for removal or blanching. Before blanching, however, the roasted peanuts must be cooled rapidly to prevent the continued roasting and darkening of the nuts.

The nuts pass through two belts during blanching—one stationary, the other moving—which rub the skin from the kernel. Once blanched, the peanuts are ready for the stage that will actually determine the texture of the peanut butter—grinding.

You may remember the day when peanut butter meant a stiff, sticky treat that had to be well stirred. At that time, the oil rose to the top of the jar. But today, modern technology has found that the use of approved stabilizing agents and rapid cooling methods prevent oil separation. Small amounts of salt and sugar also are mixed with the finely ground particles of peanut butter to accent the flavor.

In plants operating under USDA's

continuous inspection, inspectors from C&MS' Fruit and Vegetable Division have been observing the transformation of the peanut to peanut butter during the entire process. Once the process is completed, they give the finished product the final, all-important check to make certain that the peanut butter meets government procurement specifications.

As the inspector opens the container, the fresh aroma and absence of any objectionable odor assure him that the peanut butter is free from staleness.

Spreadability? Check.

Using a clean, white tray, rather than a slice of bread, the inspector tests the peanut butter under controlled lighting to determine its spreadability and color.

The inspector knows the peanut butter has been roasted to the proper medium brown if it compares favorably with his color guides, four plastic slats tinted different shades of brown. At this time he also looks for defects, such as skin or burnt particles, that would make the peanut butter less desirable to Mr. and Mrs. Consumer.

Too light? Then the flavor may be raw or bitter—doesn't pass inspection.

Too dark? Burnt flavor, also unacceptable to Uncle Sam.

Just right? Then the peanut butter is ready for the ultimate, and all-important test: Taste.

The inspector determines that the flavor is clean, fresh, free from staleness or other objectionable flavors and has the proper salt-sugar balance. Once the product measures up to these standards it can qualify for acceptance.

The jars of peanut butter on your grocer's shelf will generally not carry the USDA grade shield, although they may if the processor uses the voluntary USDA continuous inspection service. Most plants, however, employ their own quality control personnel to evaluate the product and see to it that it meets their specifications.

Let your own senses of taste and smell be your guide to quality—and, of course, only you know which brand consistently satisfies your family's peanut butter appetites! □

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# CONTENTS

- |    |                             |    |                                  |
|----|-----------------------------|----|----------------------------------|
| 2  | School Lunch Prices in Line | 11 | Your Chicken Money Adds Up       |
| 3  | New Era in Child Nutrition  | 12 | Breaking Ground For Potatoes     |
| 4  | Belleville for Food Stamps  | 14 | Food Donation Store              |
| 5  | Food Boat at Tangier        | 14 | Milk Orders Move / Plentiful     |
| 6  | Bean and the Bug            | 15 | Standards for Milk               |
| 7  | Committee Makes It Click    | 16 | U.S. Cattle Thailand-Bound       |
| 8  | Frozen Pizza Gets Treatment | 17 | Statistician and Standardization |
| 10 | Communication Lines Open    | 18 | Peanut Earns Bread & Butter      |

## COVER STORY

Frozen pizza with meat products added is inspected for wholesomeness by USDA. See pages 8 & 9.



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